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Objectives, Methods, Principles

An end to the horrors of war! A just and lasting peace! Security! Abundance! These objectives are constantly heard over the radio, are repeated in the daily press, roll from the tongues of orators, raise faint hopes and leave haunting fears in the minds of a war-weary world. How are these objectives to be obtained? Apparently by various and inconsistent means: By being so strong none dare attack us; by totally crushing the Germans and the Japanese; by being ever on our guard against the British and never trusting the Russians; by entering into treaties under the assumption that force should not, and therefore will not, longer be necessary in human relations.

Mankind needs nobler objectives than individual security and more substantial methods for obtaining them than chasing every rainbow that appears to hang in the sky. Every human being is a unit in a very complex organism, human society, and cannot long flourish unless the whole organism is well. This truism is illustrated by human history and in the structure and life of every organism in the biological world. It follows that the most advantageous human objective, even from the selfish point of view of the individual, is the welfare of society as a whole. The door to this supreme goal will remain closed until the largest political units, the sovereign states, discover and put into effect some method of remaining at peace with one another.

It is not likely that scientists as a class would have any special skill in formulating *methods* for preserving international peace. They have only vague ideas of the problems and no practise in solving them. Their preparation for making contributions lies in a quite different field, that of discovering and using *general principles*. The approach to perfection of a science is measured mainly by the breadth and reliability of the general principles that have been established, not by the number of experiments that have been made. General principles are not merely satisfying to the mind; they are of the greatest practical importance. The law of the conservation of energy, for example, has swept away the vain dreams of thousands of would-be inventors of perpetual motion machines; it lies beneath all sound theories of metabolism and nutrition of both animals and plants; it is fundamental in all discussions of the origin and evolution of the earth; and on it must rest our speculations about the duration of the sun and of all the stars in the sky.

General principles are not limited to science, though in this field they attain the greatest degree of generality and perfection. They are found in theologies and philosophies and political systems. In effect, the most important parts of the constitutions of democratic governments are essentially statements of general principles to which every law and practice and judicial decision must conform. Democratic governments are stable and enduring in direct proportion to the extent to which they hold their constitutions inviolable; autocracies, having no such safe anchorages, float with every tide of personal opinion and are eventually wrecked on the rocks of personal ambition.

In the October issue of the A.A.A.S. BULLETIN a general formula was proposed for attaining the maximum possible human liberty. A corresponding formula for approaching a solution of the simpler problem of maintaining peace among sovereign states is: *Each of the signatories hereto agrees to ask for and accept from the other contracting party only such privileges, rights and commitments as it will offer to the other party.* Instead of being an agreement between two powers relative to some particular question of common interest, this is in the nature of a declaration of a general principle under which particular agreements between them will henceforth be made. Or, more simply, it is the ratification

of a *constitution,* if it may be so designated, to the terms of which the signatories are bound. Unlike the ponderous machinery of the League of Nations, this first approach to a constitution for the world is to be adopted in a series of reciprocal agreements to each of which only two governments need be parties, and it is to be effective between them irrespective of what courses other nations may pursue. Details of relations among the contracting powers are to be defined by later agreements subject to the relevant provisions of the constitution. The negotiation of such agreements lies in the domain of statesmanship, not science.

In order to see how this proposed constitution for nations would function in practice, assume that the four great powers, Britain, China, Russia and the United States, should adopt it as a basic principle in strict harmony with which all their particular relations henceforth should be established. Perhaps the first step under this constitution would be the conclusion of non-aggression agreements among the four powers. But not all the agreements between any two of the four powers need be extended to the other two. For example, Russia and the United States might enter into an agreement respecting agricultural products or certain minerals in which the British and the Chinese would have little interest. Or Britain and the United States might agree to the establishment of naval bases by each in territorial waters of the other. And any of the four powers might enter into an agreement with a fifth, provided it did not violate any of the agreements among the four. Elasticity in matters of secondary importance to sovereign states is necessary for a time in order that their major relations may be firmly established under the exactions of general principles.

In science there has been greater success in establishing general principles and using them to advantage than in any other field of human endeavor. The lessons that may be drawn from this vast experience are illustrated by the discovery of the law of the conservation of energy in the relatively limited domain of physics, and by its gradual expansion until it illuminates every field of the natural sciences and imposes imperative conditions on every theory in them that may be proposed. Now we are involved in the first stages of the enormously more difficult problem of laying down fundamental principles under which the relations among human beings may be ordered. As a step in this great undertaking, a constitution consisting of only one principle is proposed as a general basis for establishing equality, in an important sense, between nations. Its ethical foundation is so nearly axiomatic that its validity will not be questioned. Its acceptance by even four great nations will prepare the way for adding to its provisions and increasing its adherents until it becomes an effective constitution for a world republic of sovereign powers, a constitution that will lay down principles for international relations and prohibit interference in the internal affairs of one country by another.[1]—F.R.M.

Science and the Citizen

In the current (eighth) number of *The Advancement of Science,* the quarterly journal of the British Association for the Advancement of Science, there is a full report of the Conference on Science and the Citizen that was held in London last March 20–21. The Rt. Hon. Sir John Anderson, P.C., M.P., Lord President of the Council, presented the following message to the Conference:

In all its 112 years of a very active life, the British Association can scarcely ever have set its hand to a task of greater potential value to the community than that which it is now undertaking. It is only a logical consequence of the Association's pioneer work in taking science to the citizen, in a long succession of annual meetings, that it should now provide a platform for a public discussion of the effects science, and the applications of scientific discoveries, may have upon the fuller life that mankind hopes to see emerge from the present world conflict.

Everyone now realises how large a part science is playing in the war: indeed it has now become a cliché of popular journalism to say that this is a scientists' war. On the other hand, it is not always so clearly recognised that the scientific advances that have been made in recent years will have equally far-reaching effects on the lives men hope to lead when peace returns.

We must recognise that the Government of the day showed great wisdom and foresight when, at the height of the last war, it established the Department of Scientific and Industrial Research so that, by precept and practice, it might guide industry into a fuller understanding and use of the help science could give. The Medical Research Council and the Agricultural Research Council soon followed, and I now have the honour to preside directly over a group of research organisations which, together with the research organisations of industry and the laboratories of universities and private investigators, will have a vital contribution to make to the solution of post-war problems. But that contribution can only become really effective if the general public appreciate not only the powers but the limitations of scientific research. Much harm may be done if those without scientific training are encouraged, by well-intentioned but extravagant advocacy of the marvels of science, to expect from science alone remedies for all the social problems with which we shall

[1] Since the foregoing was in type, the Four-Power Moscow Declaration, conceived and executed in a similar spirit, has been announced.

be faced. Indeed, the full harvest of the national scientific effort will not be reaped unless the same intensive and penetrating consideration is given to the application of scientific results as was called for in their original accumulation.

The British Association is therefore performing a valuable public service to-day in promoting this organised examination of the impact of scientific and technological advances on the changing social order. No organisation is better fitted by tradition or breadth of interest to do so.

The Conference, opened by Sir Richard Gregory, President of the British Association, consisted of four sessions, at each of which several papers were presented. The general subjects of the four sessions were (1) The Exposition of Science; (2) Radio and Cinema; (3) Science as a Humanity; and (4) Science and the Press. In addition, committees appointed at earlier conferences presented reports on the following subjects: Mineral Resources and the Atlantic Charter, Research on Human Institutions and Cooperative Systems in European Agriculture, Science and the Press.

Local Meetings of the Horticulturists

At the conference of the secretaries of sections and societies held in New York on September 25, the holding of local scientific meetings was approved. Even before that time the American Society for Horticultural Science had plans under way for holding local meetings. It has appointed about 60 local representatives in areas where the society has several members to consider the desirability of meeting during the coming months.

Originally the Society intended to designate December 30 as "Horticultural Day," and to hold a considerable number of meetings on that date, with the prospects of exchanging greetings during a dinner or at the principal session. Local conditions made it advisable to change that plan. At present a meeting is scheduled to be held in Chicago the last of November, another for Harrisburg, Pa., the first week in December, and a third in St. Louis about the middle of December. The Association and its other affiliated societies will follow these experiments of the horticulturists with keen interest.

Local meetings, however, are not something entirely new. Branches of the American Chemical Society and of the engineering societies have held fine local meetings for years. The great success of these societies is due in part to their local meetings. The mathematicians have held regional meetings since the founding of the American Mathematical Society. The Society of the Sigma Xi holds only local meetings. In addition, there are hundreds of local scientific societies in the cities of the United States that in the course of every year hold at least 1,000 meetings.

However, there are very important advantages in great meetings of scientists such as the Association has held in the past and will hold again in the future. At these meetings the foremost scientists in the country, and some from foreign countries, deliver general addresses and appear on the special programs. At those meetings younger scientists present papers, increase their contacts with other scientists and receive inspiration to carry on their researches with renewed zeal. At these meetings important discoveries are announced, and science gets its widest publicity. Obviously scientific statesmanship will be required to guide organized science wisely after the close of the war.

The December Scientific Monthly

There will be nine principal articles in the December issue of *The Scientific Monthly*, in addition to a biographical tribute, a section of short notes on the current progress of science, and a section of book reviews. The principal articles enter nine fields of science ranging from physics through biology to human physiology and anthropology.

The December number of the *Monthly* opens with a penetrating discussion of the effects of malnutrition during the war period by a member of the staff of the U. S. Naval Air Station at San Diego, Calif. The second article is an excursion into the peculiarities of the visual organs of invertebrates by a professor of biology in Hamilton College. In the third article a professor in Smith College uses the physical defects that have come to light during the war period to emphasize the great importance of public health education. A distinguished member of the staff of the American Museum of Natural History leads his readers by charming text and with many illustrations among the giant fresh-water fishes of South America. In the fifth article under the guidance of a member of the technical staff of the Dupont Company the reader ventures into the dangerous regions of explosives as they are used in peace and in war. A member of the staff of the National Cancer Institute, in the sixth article, attaches to an account of the life work of a great scientist who was born 100 years ago a summary of many of the most important discoveries in biochemistry. The unsolved problem of the precise line of the ascent of man from some lower form

is brought into sharp focus in the seventh article by a professor of sociology in the University of North Dakota. The eighth article, by a professor in Brooklyn College, continues an article in the November issue with the history of the establishment of the law of the conservation of energy, which is generally regarded as the most important and far reaching of all scientific generalizations. A member of the staff of the Massachusetts Department of Public Health, in the ninth article, discusses water as an adulterant. Finally, these nine excursions into various fields of science are followed by a full page portrait of the late William Lyon Phelps and a graceful tribute to his rare qualities by a lifelong friend and colleague in Yale University.

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Members of the Association who receive *Science* and the A.A.A.S. BULLETIN free with their memberships may obtain *The Scientific Monthly* also by the payment of $3 per year in addition to the regular dues. Subscriptions for *The Scientific Monthly* by those who are not members of the Association are $5 per year. More than 800 members of the Association have taken advantage of the special $3 subscription rate.

An Interesting Phenomenon

Since many members of the Association are serving in our armed forces and many more are engaged in war work, and since all members are subject to high taxes and increased living expenses, it might be expected that they would be exceptionally slow this year in paying their membership dues. For some reason not understood in the Office of the Permanent Secretary the contrary is happening.

On October 1, 1942, there were 23,011 members of the Association and on October 1 of this year there were 23,967, or 956 more than last year. On October 1 of both years statements of account were sent to all members. By October 31 last year 11,510 members, or almost exactly 50 per cent, had paid their dues for the fiscal year that began on October 1. By October 31 of this year 12,300, or 51.3 per cent, had paid their dues. Contrary to expectation, members are paying somewhat more promptly this year than last year.

There is a practical aspect to the prompt payment of dues. Those who neglect to send checks by December 1 are then billed a second time, and at later dates those still not having paid are billed a third time, etc. The cost of these successive billings amounted to about $800 last year. This year they promise to be proportionately less.

Of much greater interest than savings in the costs of rebilling are the probable reasons for a larger percentage of prompt payments of dues this year. If one may speculate, this unusual attention to dues in scientific societies means a greatly increased interest in science. Science has transformed the world physically within the memory of this generation, and has increased the average span of life in western Europe and North America by 25 per cent. In the past two decades it has made all the world neighbors and interdependent and it is playing a decisive role in the world war. Is it not true that not only scientists but all intelligent people are now looking longingly and hopefully to science to lead humanity into ways of cooperation and peace? If we lack this vision, should we boast of overthrowing dictators at whose words a little over a year ago the whole world trembled?

What Becomes of Them?

Recently a questionnaire was sent to 3,000 subscribers for *The Scientific Monthly*, exclusive of libraries but otherwise chosen at random, inquiring what disposition they make of copies of this journal after they have finished reading them. To this questionnaire to 3,000 subscribers 1,617 answers were received. Of those who answered, 461 offered to send several recent back issues if they were needed by the Association, but did not state what permanent disposition they make of them. The fact that they had kept several back issues proves that they do not quickly cast them aside. The remaining 1,156 subscribers stated what they do with old copies of the journal.

One of the three questions was whether the subscriber keeps back issues of *The Scientific Monthly* for reference. To this question 629 persons replied that they do preserve them and

in some cases have them bound. In addition, 58 subscribers reported that they keep their back issues except in cases in which they donate them to libraries or for use in the camps of our armed forces.

Another question was whether the subscriber gives his back numbers of *The Scientific Monthly* to schools, colleges, libraries or other institutions. In reply to this question 176 persons stated that they do so. In addition, 71 others reported that they usually make such disposition of their back numbers.

Finally, the subscriber was asked whether he gives his back numbers of *The Scientific Monthly* to friends and acquaintances. Of the 1,617 responding, 153 reported that they do so and 69 reported that they usually do so.

To summarise: The questionnaire was sent to 3,000 subscribers for *The Scientific Monthly*, from whom 1,617 replies were received. Of the 1,617 replying, 1,156 either preserved back copies of the journal or disposed of them as gifts to libraries, schools, friends and acquaintances or our armed forces. This experiment indicates that a large percentage of copies of *The Scientific Monthly* are preserved for a considerable period and are read at least in part by several persons.

Surface Chemistry

The symposium volume on *Surface Chemistry*, announced in the August issue of the BULLETIN, has been received from the bindery and is being distributed as orders for it are received at the Office of the Permanent Secretary.

Among the contributors to this new volume are Dr. G. H. A. Clowes, Director of Research, Lilly Research Laboratories; Dr. Irving Langmuir, former president of the Association and of the American Chemical Society, Nobel Prize Laureate in 1932, Associate Director of Research Laboratories of the General Electric Company; Dr. William D. Harkins, Andrew MacLeish Distinguished Service Professor Emeritus of Chemistry, The University of Chicago; Dr. Henry Eyring, Professor of Chemistry, Princeton University; Dr. John G. Kirkwood, Professor of Chemistry, Cornell University; and Dr. Fritz London, Professor of Theoretical Chemistry, Duke University. It is an interesting commentary on the development of chemistry that representatives of the laboratories of great universities and of great industries are working on the same problems. This essential identity of many interests of academic and industrial scientists is illustrated even more abundantly in the AAAS-Gibson Island Research Conferences, of which eleven are scheduled for successive weeks next summer.

The price of *Surface Chemistry* to members is $2.75; to others, $3.25.

Pacific Division Meetings Suspended

At the meeting of the Executive Committee of the Pacific Division of the Association, held on October 15, 1943, it was agreed that meetings of the Pacific Division be suspended for the duration of the war. The Secretary was instructed to notify all affiliated and associated societies to this effect and to offer the services of his office in facilitating the arrangements of small regional meetings by individual societies or by such groups of societies as may desire to hold meetings.

The action of the Executive Committee resulted from a poll of member societies and from consideration of the increasing difficulties in transportation and housing.

The Association Symposia Publications

In 1938 the Association published *Tuberculosis and Leprosy*, the first of its series of technical symposia volumes. Since that time 16 other volumes have followed, all in the same format, $7 \times 10\frac{1}{2}$ inches, double column, illustrated, cloth bound.

The number of contributors to the symposia that have been published has varied from about 9 to 53 per volume, the total number of contributors to the 17 volumes being 511. The total number of pages in the 17 volumes is 3445. Up to September 30 the sales had amounted to 17,505 copies which, in cartons, had a shipping weight of about 45,000 pounds.

In its technical publications the Association, after assuming all overhead and editorial costs, prices the volumes so that the receipts from sales shall as nearly as possible equal the cost of manufacture, circulars, and mailing. These costs for the 17 volumes up to September 30 were $44,974. The receipts from sales up to the same date were $47,554, providing an excess of receipts over costs of $2,580.

The most important question in connection with such publications is not that of costs and receipts, but rather that of their contribution to the advancement of science and human welfare. In the fiscal year that ended last September 30, the Association sold copies of its symposia volumes in every one of the 48 states except Idaho,

Nevada and Vermont. Moreover, 44 copies were sold in Canada and 6 in Mexico, in addition to those distributed through book dealers; and other copies were sold across the oceans directly to scientists and libraries in Argentina, Australia, Brazil, Chile, Colombia, Cuba, England, Fiji Islands, Hawaii, New Zealand, Palestine, Puerto Rico, Russia and Scotland. The medical services of our Army and Navy and Marine Corps took with them throughout the world hundreds of copies of the symposia on *Human Malaria* and *Relapsing Fever* for use in protecting our military forces against two of their most important enemies. After peace is restored these and the other symposia volumes will find their way again to France and Italy and Germany, and to the Scandinavian countries and the Balkan countries, and to China and India and Japan. They will express the desire of the Association and of American scientists to cooperate with other scientists throughout the world in advancing science for the benefit of mankind.

Tuberculosis and Leprosy (133 pp. 1938)	$2.50
Syphilis (out of print) (193 pp. 1938)	2.50
Recent Advances in Surface Chemistry and Chemical Physics (133 pp. 1939)	2.50
The Migration and Conservation of Salmon (106 pp. 1939)	2.00
Mental Health (487 pp. 1939)	3.50
The Gonococcus and Gonococcal Infection (out of print) (171 pp. 1939)	2.50
The Genetics of Pathogenic Organisms (90 pp. 1940)	2.00
Blood, Heart and Circulation (339 pp. 1940)	3.00
The Cell and Protoplasm (211 pp. 1940)	2.50
Human Malaria (406 pp. 1941)	4.00
Liebig and After Liebig—A Century of Progress in Agricultural Chemistry (119 pp. 1942)	2.50
Aerobiology (299 pp. 1942)	3.50
Relapsing Fever (136 pp. 1942)	2.50
Fluorine and Dental Health (107 pp. 1942)	2.50
Laboratory Procedures in Studies of Chemical Control of Insects (214 pp. 1943)	3.50
Surface Chemistry (168 pp. 1943)	2.75

Horticulturists and Geographers

Among the many scientific societies which were organized in the early years of this century are The American Society for Horticultural Science and the Association of American Geographers, both of which were born 40 years ago, in 1903. Both societies have been affiliated with the Association since before 1920, when its new constitution was adopted, and both of them have two representatives on the Association's Council. The history of each society is a record of a rapidly expanding importance of its field and of distinguished contributions to it.

The American Society for Horticultural Science

On June 30, 1903, a letter was sent by Prof. S. A. Beach, horticulturist at the New York State Agricultural Experiment Station, Geneva, N. Y., to official horticulturists of the agricultural colleges and experiment stations in the United States and Canada, the U. S. Department of Agriculture and the Central Experimental Farms, Canada, which read as follows:

> It is proposed that there be organized a society for horticultural science, the object of which should be more fully to establish horticulture on a scientific basis. The membership would naturally be made up of the horticulturists of the experiment stations and of the United States Department of Agriculture, together with other scientists whose work has a horticultural bearing. The meetings would be held in connection with that of some kindred society, as the American Pomological Society or the American Association for the Advancement of Science.

The response to this letter was so enthusiastic that an organization meeting was held in the library of the Massachusetts Horticultural Society at Boston on September 9, 1903, in conjunction with the biennial meeting of the American Pomological Society. Dr. L. H. Bailey of Cornell University was elected president and Prof. S. A. Beach, secretary. The first annual meeting of the Society with program was held at St. Louis, Mo., on December 28 and 29, 1903, in association with the meeting of the American Association for the Advancement of Science. The Society has met annually since that time, except for the annual meeting (39th) which was to have been held in New York City on December 29, 30 and 31, 1942, but which was cancelled because of the war.

It is interesting to note how closely the Society has kept to the original suggestions contained in the letter by Prof. Beach proposing organization. Membership is still largely from professional horticulturists in state, government, and provincial service, meetings are still held in conjunction with the American Association for Advancement of Science, and the activities are essentially the promotion of the science of horticulture.

Three classes of membership are recognized, namely: voting membership, which is limited to those having the baccalaureate degree and holding an official position in college, experiment station, or federal, state or provincial work; non-voting membership, which is limited to those having a baccalaureate degree, but who are not identified with a college, experiment station, or federal, state or provincial government; and junior branch membership, which is limited to groups of students in universities and colleges who are interested in horticulture. Membership dues are $5.00 a year.

The chief activities of the Society are the holding of meetings, at which are presented the results of research, and the publication of *Proceedings*. Besides the general annual meeting, which is held in conjunction with the American Association for the Advancement of Science, sectional meetings are held by the

Southern Section in conjunction with the meeting of the Southern Agricultural Workers, by the Great Plains Section, and by the Pacific Coast Section, meeting in conjunction with the Pacific Division of the American Association for the Advancement of Science. The *Proceedings*, 41 volumes of which have been published, have appeared as one volume a year until recently, when two volumes have been undertaken. Approximately 1,200 pages are published each year.

In subject-matter fields, the Society is divided into sections on general pomology, small fruits, vegetable crops, and floriculture and ornamental horticulture. It is interesting to observe the change in emphasis in horticultural research since the inception of the Society in 1903. At the time of its organization, horticulture was just emerging from the variety-testing stage and entering upon studies of technical research. Early volumes carry interesting matter upon such modern topics as shading, disease resistance, fruit bud differentiation, abscission, the use of artificial light, ripening of fruits, genetics, and viability of pollen. Tree fruits were then the chief consideration. Gradually, vegetable crops have crept forward until they now hold a prominent place, and more recently floriculture and ornamental horticulture have forged ahead.

Because the Society has included members who are active in not only fundamental research but also application and extension, interest has covered a wide range of horticultural crops and a breadth of plant science. Accordingly, the Society has been a logical and useful center around which to rally various specialized science groups, and each year it has attempted to sponsor symposia upon topics which have tended to draw together workers in such related fields as animal nutrition, soil science, biochemistry, general plant physiology, statistics, genetics, and phytopathology.

Through the courtesy of Mr. Leonard Vaughan, of the Vaughan Seed Stores of Chicago, the Society offers each year two awards of $500 each; one for the best paper presented to the Society and published in the *Proceedings* in the field of vegetable crops, having commercial application, and a second for a similar paper in the field of floriculture and ornamental horticulture.

No definite plans have been formulated for the war years, excepting that the *Proceedings* will be published as in the past and that meetings will be held if and when possible. The majority of the membership is already active in the war effort, involving crop production, and the utilization, handling and processing of foodstuffs. A survey has been made of the membership, and in cooperation with both private and government agencies the Society is making every effort to be as helpful as possible towards the winning of the war.—H. B. TUKEY, *Secretary*.

The Association of American Geographers

The earliest recorded proposal for the organization of "The Association of American Geographers" was contained in an address by William Morris Davis before the Section on Geology and Geography (E) of the American Association for the Advancement of Science at the St. Louis meeting in 1903. The second, more formal, step was taken by some 30 geographers in Washington, D. C., in September, 1904, at the Eighth International Geographic Congress, when definite plans were presented by Prof. Davis, in collaboration with Henry C. Cowles, Henry Gannett, Angelo Heilprin, and William F. Libbey. This distinguished group was commissioned to draft a Constitution, a document which was adopted, with but minor alteration, at the first annual meeting of the new society on December 29, 1904, in Philadelphia. The Society, once safely launched, turned its attention to a program of 22 papers.

The Constitution of the Society, practically unchanged since the day of its adoption, sets forth the purposes of the organization, designates the structure of its governing board, broadly rules upon qualifications for membership and the method of its selection, and provides for meetings.

The objects of the Society "shall be the cultivation of the scientific study of geography in all its branches, especially by promoting acquaintance, intercourse, and discussion among its members, by encouraging and aiding geographical exploration and research, by assisting the publication of geographical essays, by developing better conditions for the study of geography in schools, colleges, and universities, and by cooperating with other societies in the development of an intelligent interest in geography among the people of North America." The second article provides for the official organization—a president, a vice-president, a secretary, a treasurer, and three councilors—who are elected by ballot of the entire membership. The Council also includes the two most recent past presidents, as well as the editor who serves in ex-officio capacity.

The Society has scrupulously adhered to these provisions no less than to Article 3 which stipulates that "members shall be limited to persons who have done original work in some branch of geography." This at once restricts the size of the organization and ensures professional status. Nominations for membership must be made on an official form in which two sponsoring members summarize the candidate's qualifications. These are reviewed by a standing committee which recommends action to the Council; the latter, in turn, proposes acceptable candidates to the membership who vote by ballot. The Society membership is thus marked by stability and moderate growth. From its original 40 members in 1904, nine of whom are still active, the Society has grown to 184 at the present time. The annual dues are $7.50. Throughout the Society's existence its Council has strictly interpreted the adjective "American" in the title. Foreign geographers have often been invited to participate at meetings, but the few Europeans whose names have been recorded on the rolls were residents of the United States at the times of their election.

Within recent years Latin American scholars in contiguous territories have been elected to membership.

The first bylaw provided for a publication which, upon its origin in 1911, was named the *Annals*. Prior to 1911, members published their papers in various places, especially in the *Bulletin* of the American Geographical Society; in fact, the proceedings of the second annual meeting are fully published therein (Vol. 38, 1906, pp. 65–134). During the period from 1913 to 1922, a "joint research fund" was maintained, through which members of either society received the official publication of the other. Society members are still favored with quarterly issues of the *Geographical Review*. Issued annually during its first 12 volumes, the *Annals* has been a quarterly since 1922 and is now in its 32d volume. It contains abstracts of all papers delivered at the Society's meetings, presidential addresses, proceedings of round-table conferences, papers by members whether or not presented at meetings, and occasional monographs of unusual merit. Through exchange of publications, the Society maintains contact with a large number of foreign and domestic institutions. The secretary annually publishes a *Spring News Letter* which contains acts of the Council and the Treasurer's report, and presents a current record of members' activities.

Diminishing concern with pedagogical problems, permitting greater attention to geographical research, is chief among the trends in the Society's history. This trend was hastened by the origin of the National Council of Geography Teachers, which successfully carries forward some of the objectives envisioned by the founders of the Society.

Research has lately been stimulated by special research funds and the "Atwood Award," established by Wallace W. Atwood.

The Society, through committees and unofficially through its membership, has contributed significantly to the present war effort, and the trend is toward still greater participation. Fully 25 per cent of the personnel hold positions of responsibility in governmental and military agencies, and in research organizations—in the Office of Strategic Services, the War Shipping Board, the Office of the Geographer of the Department of State, the Military Intelligence Service of the Army, the Lend-Lease Administration, the Office of Economic Warfare, to mention only a few of the many avenues of service. In normal times, as well, members have occupied administrative and advisory posts in the Federal departments of Commerce, Agriculture and the Interior, and on the National Resources Board.

By constitutional provision, the annual meeting is called for the week of January 1, when the Society arranges joint programs with the A.A.A.S. The Council voted that the postponed Columbus meeting be combined with the Fortieth Annual Meeting to form the proceedings of the Society in Washington, D. C., on September 17 and 18, 1943. The sessions were devoted exclusively to consideration of studies and research methods related to the war and the post-war period.—RALPH H. BROWN, *Secretary*.

Officers of the Association

President, Isaiah Bowman; *Permanent Secretary,* F. R. Moulton; *General Secretary,* Otis W. Caldwell; *Treasurer,* W. E. Wrather; *Director of Publications,* F. L. Campbell; *Assistant Secretary,* Sam Woodley.

Executive Committee: Burton E. Livingston, *Chairman;* Roger Adams, Joseph W. Barker, Isaiah Bowman, Otis W. Caldwell, Walter B. Cannon, J. McKeen Cattell, Roy E. Clausen, Kirtley F. Mather, F. R. Moulton, and W. E. Wrather.

Membership in the Association

According to the Constitution, the objects of the Association are to promote intercourse among those who are cultivating science in different parts of America, to cooperate with other scientific societies and institutions, to give a stronger and more general impulse and more systematic direction to scientific research, and to procure for the labors of scientific men increased facilities and a wider usefulness. Members may reside in any country. A person desiring to become a member of the Association should fill in a membership application card that may be obtained from the Office of the Permanent Secretary and return it with his payment of $5.00 for one year's dues. Every member in good standing receives with his membership a subscription for either *Science* or *The Scientific Monthly*. Dues are for the fiscal year that begins October 1; the subscription begins the following calendar year. A member desiring to receive both journals concurrently may do so by paying $3.00 in addition to the regular dues. Members in good standing receive also, without extra charge, subscriptions for the A.A.A.S. BULLETIN, and they may purchase symposia publications at prepublication prices, and after publication at special prices to members.

A person who pays $100 in one fiscal year may be elected a life member; sustaining members pay $1,000. Both classes are exempt from the payment of further dues but are entitled to all the privileges of membership.

An incorporated scientific society or institution or a public or incorporated library may become a member by paying the entrance fee of $5.00 in addition to the dues. Such institution members are entitled to the same privileges as individual members.

Members are encouraged to nominate for membership persons who desire to cooperate in carrying out the objects of the Association. Names may be sent to the Office of the Permanent Secretary at any time. In the letter of invitation to become a member of the Association the name of the person making the nomination is ordinarily mentioned.

Changes of Address

New addresses for the Association's record and for mailing the journals *Science* and *The Scientific Monthy,* as well as the A.A.A.S. BULLETIN, should be in the Office of the Permanent Secretary, Washington 25, D. C., at least two weeks in advance of the date when the change is to become effective.